HENSOLDT and Nano Dimension achieve breakthrough in utilising 3D printing in high-performance electronic devices

Published on 22 May 2020

Sensor solutions provider, HENSOLDT together with the renowned Additively Manufactured Electronics (AME)/Printed Electronics (PE) provider, Nano Dimension, has achieved a major breakthrough on its way to utilising 3D printing in the development process of high-performance electronics components.

10-layer Printed Circuit Board

Utilising a newly developed dielectric polymer ink and conductive ink from Nano Dimension, HENSOLDT succeeded in assembling the world-wide first 10-layer Printed Circuit Board (PCB), which carries high-performance electronic structures soldered to both outer sides.
Until now, 3D printed boards could not bear the soldering process necessary for two sided population of components.

**Military sensor solutions**

“Military sensor solutions require performance and reliability levels far above those of commercial components,” said HENSOLDT Chief Executive Officer, Thomas Müller.

Thomas adds, “To have high-density components quickly available with reduced effort by means of 3D printing gives us a competitive edge in the development process of such high-end electronic systems.”

**High Performance Electronic Devices**

“Nano Dimension’s relationship with HENSOLDT is the type of partnership with customers we are striving for,” commented Yoav Stern, Nano Dimension President & Chief Executive Officer.

Yoav adds, “Working together and learning from HENSOLDT led us to reach a first-of-its-kind in-depth knowledge of polymer materials applications. Additionally, it guided us in the development of Hi-PEDs (High Performance Electronic Devices) that create competitive edges by enabling unique implementations with shortest time to market.”

**AME engineering methodology**

AME is useful to verify a new design and functionality of specialised electronic components before production. AME is a highly agile and individual engineering methodology to prototype a
new electronic circuitry.

This leads to significant reduction of time and cost in the development process. Furthermore, AME allows for a verified and approved design before production starts, leading to higher quality of the final product.

3D printing electronics

HENSOLDT started working with Nano Dimension’s DragonFly 3D printing system in 2016, in order to examine the possibilities of 3D printing electronics. Last year, HENSOLDT successfully implemented the DragonFly Lights-Out Digital Manufacturing (LDM) printing technology, the industry’s only additive manufacturing platform for round-the-clock 3D printing of electronic circuitry.
Demand increases for specialist IT skills among security system integrators. How can security system integrators not just survive but thrive in today’s IT-led market? The key seems to be in training. As increasing demand for specialist IT skills among security system integrators,

HENSOLDT’s introduces Kalaetron Attack to provide electronic shield for... Sensor solution provider HENSOLDT has developed a modular airborne electronic combat system: Kalaetron Attack. By neutralising enemy fire co...

The increased role of video surveillance technology in our changing en...

Today’s environment has evolved into something that according to some may seem unexplainable. But in the context of video surveillance...